

Art Unit: 1754

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Ruggiero on December 8, 2005.

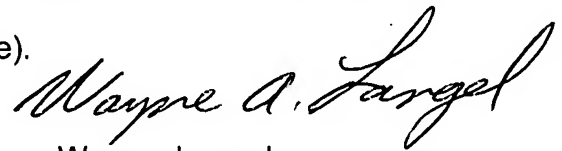
In claim 1, line 5, after "a" the word - - nozzle - - has been inserted. In line 7, "section" (both occurrences) has been changed to - - sectional - - . Also in line 7,, after "said" the word - - nozzle - - has been inserted and "have" has been changed to - - is - - . In line 9, after "velocity" the word - - of - - has been inserted.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wayne Langel whose telephone number is 571-272-1353. The examiner can normally be reached on Monday through Friday, 8 am - 3:30 pm Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Wayne Langel
Primary Examiner
Art Unit 1754

11-17-85

Serial No. 10/620,902

Amendments to Claims

The following listing of claims will replace all prior versions and listings of claims in the pending application.

Claim Listing

1. (Currently amended) A method for producing nitrogen trifluoride by contacting a fused ammonium fluoride salt with a fluorine gas comprising:

forming a stream of micro droplets of the fused ammonium fluoride salt by a rapid ejection of the fused ammonium fluoride salt in a reactor through a ~~nozzle~~ jet ejector pipe having nozzles, each of said nozzles having a cross-sectional area and a throat having a throat cross sectional area, wherein said throat cross section area to said cross section area have a ratio selected from the group consisting of 5, 25, 5 through 25, and any combinations thereof, and wherein said fused ammonium fluoride salt at said nozzles has an ejecting linear velocity about 2 meters/second to about 30 meters/second;

circulating the fused ammonium fluoride salt from a lower portion to an upper portion of said reactor; and

contacting within said stream of micro droplets the fused ammonium fluoride salt with the fluorine gas, the fluorine gas being sucked in said reactor through a suction pipe for fluorine gas by a negative pressure, said negative pressure being formed around said nozzle due to said rapid ejection of the fused ammonium fluoride salt; and

transferring a portion of the fused ammonium fluoride salt in said reactor to a second jet-loop reactor, said portion being rapidly ejected in said second jet-loop reactor through a second nozzle, said portion being circulated from a lower

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portion to an upper portion of said second jet-loop reactor, a stream of micro droplets of said portion being contacted with ammonia gas, said ammonia gas being sucked in said second jet-loop reactor by a negative pressure being formed around said second nozzle due to an ejection of the fused ammonium fluoride salt, wherein said portion and said ammonia gas continuously produce nitrogen trifluoride, continuously reproduce the fused ammonium fluoride salt and recycle the fused ammonium fluoride salt reproduced in said second jet-loop reactor for nitrogen trifluoride production.

2. (Previously presented) The method for producing nitrogen trifluoride according to claim 1, further comprising the step of:

periodically or intermittently isolating the fluorine gas and sucking an ammonia gas in said reactor to reproduce the fused ammonium fluoride salt through a contact of the ammonia gas with said stream, wherein a ratio of HF/NH_3 is maintained at a constant level.

3. (Previously presented) The method for producing nitrogen trifluoride according to claim 1, wherein the fluorine gas is introduced into said reactor through said suction pipe, the fluorine gas being diluted with mixed gases, said mixed gases having NF_3 in said reactor, the fluorine gas being introduced in said reactor by connecting said upper portion with said suction pipe using a tube.

4. through 6. (Canceled).

7. (Previously presented) The method for producing nitrogen trifluoride according to claim 1, wherein an ejecting linear velocity of the fused ammonium fluoride salt at said nozzle is about 5 meters/second through about 20 meters/second.

8. (Original) The method for producing nitrogen trifluoride according to claim 1, wherein the fused ammonium fluoride salt and the fluorine gas are contacted with each other at a temperature of about 100 degrees Celsius through about 150 degrees Celsius.

9. (Original) The method for producing nitrogen trifluoride according to claim 1, wherein the fused ammonium fluoride salt and the fluorine gas are contacted with each other at a temperature of about 110 degrees Celsius through about 130 degrees Celsius.

10. (Original) The method for producing nitrogen trifluoride according to claim 2, wherein the fused ammonium fluoride salt and the ammonia gas are contacted with each other at a temperature of about 70 degrees Celsius through about 150 degrees Celsius.

11. (Currently amended) The method for producing nitrogen trifluoride according to claim [[4]]1, wherein the fused ammonium fluoride salt and the ammonia gas are contacted with each other at a temperature of about 70 degrees Celsius through about 150 degrees Celsius.

12. (Original) The method for producing nitrogen trifluoride according to claim 2, wherein the fused ammonium fluoride salt and the ammonia gas are contacted with each other at a temperature of about 90 degrees Celsius through about 120 degrees Celsius.

13. (Currently amended) The method for producing nitrogen trifluoride according to claim [[4]]1, wherein the fused ammonium fluoride salt and the ammonia gas are contacted with each other at a temperature of about 90 degrees Celsius through about 120 degrees Celsius.